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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/927,719	08/11/2001	Clarence E. Blanchard	JT-3166-US	6359

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[REDACTED] ART UNIT

[REDACTED] PAPER NUMBER

3617

DATE MAILED: 03/20/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/927,719	BLANCHARD, CLARENCE E.
	Examiner	Art Unit
	Andrew Wright	3617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 11 August 2001.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-10 and 12-28 is/are rejected.
- 7) Claim(s) 11 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 11 August 2001 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Claim 8 recites the limitation "said stator housing" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

5. Claims 1-4, 12-15, 17, 18, 23-25, 27 and 28 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Ishigaki (US 6,283,805.) Regarding claim 1, Ishigaki discloses a boat having an outboard jet propulsion unit. The jet propulsion unit comprises an engine (11), an engine support structure (10), a duct with a horizontal inlet and a vertical outlet (see fig. 2), an impeller (5), and a drive train. The duct is supported

by the engine support structure. The impeller is mounted on a horizontal impeller shaft (14) which penetrates the duct. The impeller rotates inside the duct to draw water into and push water out of the duct. The drive train couples the engine to the impeller shaft for driving the impeller.

6. Regarding claims 2-4, the drive train includes a vertical drive shaft (12) and gears (17, 19) that transfer the rotation of the drive shaft to the impeller shaft. The gears include two bevel gears, one on each of the drive shaft and impeller shaft, that mesh. A gear housing (3) holds first and second bearings (16, 18) that support the respective bevel gears.

7. Regarding claim 12, it can be seen from figure 1 that the propulsion unit, including the duct inlet, does not extend below the lowest point of the hull bottom.

8. Regarding claim 13, the propulsion unit has a steering nozzle (8) at the duct outlet that pivots about a generally vertical axis.

9. Regarding claim 14, the propulsion unit comprises three housings: an engine support housing (10), a combination inlet and gear housing (3), and a duct outlet housing (6). The first housing (10) supports the engine and has a drive shaft passage through which the drive shaft vertically extends. The second housing (3) is attached to and located beneath the first housing. It comprises a water tunnel (51) and a chamber that communicate through a hole in the interior wall (see figure 4). A gear and bearing assembly are housed in the chamber. The water tunnel has an inlet and an outlet. The drive shaft is coupled to the gear and bearing assembly. The impeller shaft is also coupled to the gear and bearing assembly and penetrates the opening of the interior

wall. An impeller (5) is mounted to the impeller shaft and rotatable in the tunnel. The third housing (6) is attached to the second housing (3) at the outlet of the water tunnel of the second housing. The third housing has a flow through passage in communication with the water tunnel and having an outlet.

10. Regarding claim 15, the third housing contains a hub and bearing for supporting an end of the impeller shaft.

11. Regarding claim 17, it can be seen from figure 1 that the propulsion unit, including the duct inlet, does not extend below the lowest point of the hull bottom.

12. Regarding claim 18, the propulsion unit has a steering nozzle (8) at the duct outlet that pivots about a generally vertical axis.

13. The limitations of claims 23-25, 27, and 28 are included in the invention of Ishigaki as already discussed with respect to claims 1-4, 12, 13-15, 17, and 18.

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ishigaki in view of Inwood (US 4,538,996.) Ishigaki does not discuss the exhaust system of his outboard jet propulsion unit. Inwood teaches that it is well known to discharge exhaust gasses below the waterline (lines 35-36, col. 1). Inwood discloses an outboard jet propulsion unit that using housings and passageways to route the exhaust gasses from

the engine to a discharge below the waterline. Specifically, Inwood discloses an engine support structure that comprises an exhaust housing (30) that has an exhaust gas passage (the port through which gas passes from the manifold (84) to the chamber (43). Exhaust gasses from the chamber are discharged below the waterline for the purpose of noise attenuation. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Ishigaki by providing an exhaust passage through member (10), such that the gas could be discharged below the waterline.

16. Regarding claim 6, Inwood also discloses that the housing is attached to a tilt-trim tube by brackets. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the invention of Ishigaki by providing the exhaust housing (10) with brackets that could be connected to a tilt-trim apparatus. The purpose would be to provide a tilt-trim operation to the outboard motor, as is well known in the art.

17. Regarding claims 7 and 8, Inwood teaches creating chambers and passageways in the duct housing such that the exhaust gasses can be routed to below the waterline. It would have been obvious to the skilled artisan to further modify the invention of Ishigaki by routing the exhaust through the inlet housing (3) and duct housing (6) en route to a discharge point below the waterline.

18. Regarding claim 9, the modified invention of Ishigaki as described with respect to claim 8 has a stator hub and a plurality of stator vanes with the impeller shaft being rotatably supported by a bearing in the hub.

19. Regarding claim 10, the modified invention of Ishigaki as described with respect to claim 6 comprises an exhaust housing (10), an inlet housing (3) attached to the exhaust housing, the inlet housing comprising the duct inlet (3a), and the inlet housing (3) and gear housing being integrally formed (see figure 4.)

20. Regarding claims 16, 19-22, and 26, as already discussed, Ishigaki discloses all of the aspects of the claimed invention except for the exhaust gas handling means. Inwood teaches that it is common to route the exhaust gasses from the engine to a discharge point below the waterline through a series of chambers and passages. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify the outboard propulsion unit of Ishigaki by routing the exhaust gasses down through housing (10), through inlet housing (3), and through duct housing (6) to a discharge point below the waterline. The motivation would be to attenuate noise from the exhaust discharge of the engine.

Allowable Subject Matter

21. Claim 11 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

22. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hall discloses an outboard jet propulsion system that routes the exhaust gas down through the vertical housing and discharges it below the waterline. Varney et al. ("662) discloses an outboard jet propulsion system that routes the exhaust

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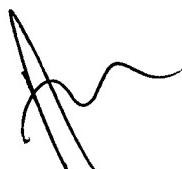
gas down through the vertical housing and through the impeller and discharges it below the waterline. Davis discloses routing exhaust gasses down through a vertical housing and through various passages and chambers in an impeller housing. Rodler discloses an outboard jet propulsion system with an exhaust routing system. Varney et al. ('626) discloses an outboard jet propulsion unit where exhaust gasses are routed down through the vertical housing and also through ports in the impeller housing. Hall et al. discloses an outboard impeller that has exhaust chambers and passageways forming a jacket around the impeller housing.

23. Any inquiry concerning this communication should be directed to examiner Andrew D. Wright at telephone number (703) 308-6841. The examiner can normally be reached Monday-Friday from 9:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, S. Joe Morano, can be reached at (703) 308-0230. The fax numbers for the organization where this application or proceeding is assigned are (703) 308-3519 for both regular and After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist at (703) 308-1113.

Andrew D. Wright
Patent Examiner
Art Unit 3617



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